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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,158	11/16/2001	Kenneth B. Higgins	5113D	1180

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Legal Department (M-495)
P.O. Box 1926
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EXAMINER	
JUSKA, CHERYL ANN	
ART UNIT	PAPER NUMBER
1794	
MAIL DATE	DELIVERY MODE
02/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/993,158	HIGGINS ET AL.	
	Examiner	Art Unit	
	Cheryl Juska	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1,3-35,38,40-49,58-72,77-79,81-85,88-97,99,100,102-128,130,131,134-136,138,141 and 151.

Continuation of Disposition of Claims: Claims rejected are 1,3-35,38,40-49,58-72,77-79,81-85,88-97,99,100,102-128,130,131,134-136,138,141 and 151.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed November 19, 2007, has been entered. Claims 41, 88, 123, 130, 134, 136, 138, and 141 have been amended as requested. Claims 2, 36, 37, 39, 50-57, 73-76, 80, 86, 87, 98, 101, 129, 132, 133, 137, 139, 140, and 142-150 have been cancelled. The pending claims are 1, 3-35, 38, 40-49, 58-72, 77-79, 81-85, 88-97, 99, 100, 102-128, 130, 131, 134-136, 138, 141, and 151.

2. Said amendment is sufficient to withdraw the 112, 2nd rejections set forth in sections 6-13 of the last Office Action (Non-Final Rejection mailed 06/18/07).

3. The previously indicated allowable subject matter (sections 14-16 of the last Office Action) is hereby withdrawn in view of the rejection set forth below based upon the newly cited reference to Ito (JP 07-275107).

Claim Objections

4. Claim 26 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. The limitations of claim 26 are already recited in claim 1, from which 26 depends.

5. Claim 79 is objected to because of the following informality: The claim recites the "adhesive comprises a hot." Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 3-35, 38, 40-49, 58-72, 77-79, 81-85, 88-97, 99, 100, 102-128, 130, 131, 134-136, 138, 141, and 151 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-275107 issued to Ito et al. in view of US 4,522,857 issued to Higgins.

Ito discloses a carpet consisting of a carpet fabric or material 1 (i.e., primary carpet) joined to lining material 2 comprised of polyurethane rebond foam (abstract, Figure, and section [0015] of English translation by machine). The rebond foam layer (i.e., polyurethane elastic material 3) comprises foam urethane chips 4 made from industrial waste or scrap foam and a urethane binder 5 (abstract, section [0006]), and Figure). The rebond foam layer may optionally include filler of waste carpet (section [0007]). Said lining material 2 includes said rebond foam layer 3 bonded to a nonwoven reinforcing fabric (abstract and Figure). In a working example, the carpet is made by forming the rebond foam layer of 110 kg of foam chips of 3-10 mm in size mixed with 15 kg of polyurethane binder, spreading into a sheet, and curing said sheet (section [0014]). The rebond foam sheet is sliced to a desired thickness, such as 8 mm, and then bonded to a polyester nonwoven fabric having a basis weight of 30 g/m^2 by heat and pressure to form the lining material 2 (section [0015]). After cooling, said lining material is bonded to a carpet

material with heat and pressure to form a carpet (section [0015]). The carpet is suitable for carpet tiles (section [0003] and [0019]).

Thus, Ito discloses the present invention with the exception of (a) the flame laminated backing composite comprising a reinforcing material and a backing material bonded to a rebond foam layer via flame lamination and (b) the adhesive layer disposed in layered relation between the primary carpet and the flame laminated backing composite.

With respect to the former exception, Ito does teach two of the three layers of the flame laminated backing composite (i.e., the rebond foam layer and a backing material). Additionally, while Ito does not explicitly teach bonding of the rebond foam layer and backing material via flame lamination, said layers are bonded by a heat and pressure lamination process. It is asserted that flame lamination is but a specific type of bonding via heat and pressure. Thus, the structural difference between a flame laminated bond and a bond made by heat and pressure, as described by Ito, is not necessarily clear. There is no evidence on record showing that flame lamination produces a structurally different product than that produced by the method of Ito.

As such, it is argued that Ito teaches the structural features of the flame laminated backing composite with the exception of a reinforcing material bonded to the rebond foam layer. Thus, in reality, the only features the Ito reference fails to teach of the presently claimed invention are the reinforcing material and the adhesive layer bonding the primary carpet to the flame laminated backing composite. However, said reinforcing or stabilizing layers are well known in the art of carpets and, specifically, carpet tiles. Additionally, the claimed adhesive layer is also well known in the carpet tile art.

For example, Higgins '857 discloses a tufted or bonded carpet tile comprising a primary

carpet fabric 12, two adhesive layers 16 sandwiching a stabilizing layer 18, and a foam cushion layer 14 (abstract, Figure 1 and col. 1, lines 26-60). The primary carpet fabric may comprise yarns tufted into a primary backing fabric and adhered thereto by a latex precoat (col. 1, lines 34-38). The adhesive layer is a thermoplastic material, such as a polyolefin or polyamide polymer, and is present in an amount of 10-70 oz/yd^2 (col. 1, lines 48-55). The stabilizing layer is preferably a fiberglass scrim, but may be a woven or nonwoven fabric of polyester, nylon, or polypropylene (col. 1, lines 26-33 and 52-55). The foam layer may be 2.54-25.4 mm thick with a density of about 10-60 oz/yd^2 (col. 2, lines 1-6).

Thus, it would have been readily obvious to one of ordinary skill in the art to employ the adhesive layers and stabilizing layer of Higgins '857 as intermediate layers between Ito's primary carpet fabric 1 and rebond foam cushioning material 2 in order to increase delamination strength and to enhance the dimensional stability of the carpet tile, rather than by laminating the primary carpet and foam backing layers through heat and pressure. Additionally, it would have been readily obvious to one skilled in the art to employ the specifics of the adhesive amount and composition and the structures and compositions of the primary carpet fabric and stabilizing fabric in order to produce a successful carpet tile having dimensional stability. (Note these features are all well known in the art.) Therefore, applicant's invention would have been obvious to one of ordinary skill in the art based upon the teachings of the prior art.

With respect to the physical properties recited in the claims (e.g., cup, curl, internal tear strength, appearance rating, etc.), it is argued that said properties would have been obviously present upon modification of the Ito invention with the teachings of Higgins '857. Specifically, the structural and chemical features of the claimed carpet are met by the teachings of the prior

art. As such, it is reasonable to presume that said prior art will possess the same physical properties, including those properties presently recited. Like materials cannot have mutually exclusive properties.

Regarding the claim limitation to the density of the rebond foam layer, the cited prior art fails to teach the claimed density. However, it would have been readily obvious to one of ordinary skill in the art to manipulate the foam density in order to obtain the desired cushioning properties. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215.

Regarding the limitation wherein the layer of rebond foam has at least one lateral surface which is cut, peeled, or slit, said limitation is also rejected as being obvious over the cited prior art. Specifically, Ito teaches slicing laterally the rebond foam layer to form a sheet of a desired thickness (section [0015]).

With respect to the recitation that the rebond foam particles are open-cell foamed polyurethane, the cited prior art fails to explicitly teach that the foam chips are comprised of open-cell foam. However, Ito does teach said foam chips consist of soft, flexible polyurethane foam (abstract and section [0014]). Hence, it would have been readily obvious to select an open-cell foam since said many open-cell foams are known to be soft and flexible. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Regarding the limitation that the carpet tile includes a plurality of layers of rebond foam, while the prior art explicitly fails to teach said plurality of layers, applicant's claims would have been readily obvious over the cited prior art. Specifically, it would have been obvious to include

multiple layers of rebond foam in order to increase the cushioning properties of the carpet tile, while providing added dimensional stability.

The cited prior art fails to explicitly teach the overall height. However, the claimed height would have been readily obvious to one of ordinary skill in the art. In particular, commercially successful carpet tiles have a limited overall height measured in millimeters or inches, rather than feet or yards. As such, it would have been obvious to one skilled in the art to employ the claimed overall height, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Therefore, the pending claims 1, 3-35, 38, 40-49, 58-72, 77-79, 81-85, 88-97, 99, 100, 102-128, 130, 131, 134-136, 138, 141, and 151 are rejected as being obvious over the cited prior art.

Conclusion

8. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 09/24/07 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cheryl Juska/
Primary Examiner
Art Unit 1794

cj
February 15, 2008